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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,906	02/20/2004	Kenji Shimizu	Q80049	5317
23373	7590	05/03/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			FALASCO, LOUIS V	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,906

Applicant(s)

SHIMIZU ET AL.

Examiner

Louis Falasco

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 13, 2004, June 9, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/082,201.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/20/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

APPLICATION

This applicant is acknowledged as a Continuation-In-Part of SN 10/082,201 now US Patent 6,699,600. Applicants are requested to update the status of the parent application in the instant application.

PAPERS RECEIVED

The Information Disclosure Statement filed 02/23/05 is acknowledged.

CLAIMS

The claims are: 1 to 4. All claims are under consideration.

DETAILED ACTION

Basis

The following is a quotation of the second paragraphs of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Rejections

1. Claims 1 to 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word *type* in the expression of 'CoPtX type alloy' and 'CoCrPtX type alloy', independent claims 1 and 2 extend the scope of the claims so as to render them indefinite. See 2173.05(b). Ex parte Copenhagen, 109 USPQ 118 (Bd. App. 1955).

The claim term "a large number" with regard to perpendicular magnetic film grains separated by a grain boundary layer appearing in independent claims 1 and 2 render the claims indefinite as to scope, since *a large number* is an undetermined numeric range *Ex parte Skuballa*, 12 USPQ2d 1570 (Bd. Pat. App. & Inter. 1989).

2. Claims 1 to 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims are drawn to a magnetic recording medium with perpendicular magnetic film comprised of CoPtX alloy claims 1 and 3 or CoCrPtX alloy claims 2 and 4 where X is at least one of SiO₂, SiO, Si₃N₄, Al₂O₃, AlN, TiO, TiO₂, TiN, BN, CaF₂, and

Art Unit: 1773

TiC. However it is not understood how **SiO₂, SiO, Si₃N₄, Al₂O₃, AlN, TiO, TiO₂, TiN, BN, CaF₂**, in **TiC** as **X** in either **CoPtX** or **CoCrPtX** could qualify as an *alloy*.

3. Claims 1 to 4 are rejected under 35 U.S.C. 112, second paragraph, *as failing to set forth the subject matter which applicant(s) regard as their invention*. Evidence that claims 1 to 4 fail to correspond with that which applicants regard as the invention can be found in the specification at [pg 3 3rd paragraph], [pg 9 1st paragraph], where applicants assert the perpendicular magnetic film comprise a **CoPtX** alloy *claims 1 and 3* or **CoCrPtX** *claims 2 and 4* alloy where **X** is one or more of **Mo, B, V, W, Zr, Re, Cu, Ru, Hf, Ir, and Y**, and also in the specification at [pg 9 7th paragraph], [*Test Examples*] where the magnetic grains are not an alloy or compound of **CoCrPtX** where **X** is any of **SiO₂, SiO, Si₃N₄, Al₂O₃, AlN, TiO, TiO₂, TiN, BN, CaF₂**, and **TiC** - but have particles that are separated by any of **SiO₂, SiO, Si₃N₄, Al₂O₃, AlN, TiO, TiO₂, TiN, BN, CaF₂**, and **TiC**. The invention is completely unlike what has been delineated in the claims where perpendicular magnetic film comprised of the compound **CoPtX** where **X** is any of **SiO₂, SiO, Si₃N₄, Al₂O₃, AlN, TiO, TiO₂, TiN, BN, CaF₂**, and **TiC**).

Examiner comments on examples in the specification

4. The examples and showings, illustrated at Fig. 3, in the instant specification have been considered however they have not been found to bear on what has been claimed. They are all concerned with comparisons of **CoCrPtX** where **X** is a variety of metals and

Art Unit: 1773

not reflecting any of the subject matter claimed CoCrPtX where X is any of SiO₂, SiO, Si₃N₄, Al₂O₃, AlN, TiO, TiO₂, TiN, BN, CaF₂, and TiC.

OTHER REFERENCES

5. It has been noted by the examiner that prior art teaching CoCrPtX type alloys (where X may be one or more of Mo, B, V, W, Zr, Re, Cu, Ru, Hf, Ir, and Y) include Futamoto et al (US 5685958); Lee et al (US 5693426); Chen et al (US 5866227); Abarra et al (US 6562489); Shimizu et al (US 6627301).
6. It has been noted by the examiner that prior art teaching a variety of CrPt alloys in oxide or nitride salt matrix include Yusu et al (US 6174597); Kikitsu et al (US 6602620) and Lu (US 2004/0053073).

CONCLUSION

The claims are 1 to 4.

- No claim has been allowed.
- Information Disclosure Statement has been received.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, PhD whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol D. Chaney, PhD can be reached at (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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04/05


STEVAN A. RESAN
PRIMARY EXAMINER